TABLE A-1.

TECHNICAL REVIEW ACTION SUMMARY

SDG 10316058

Arsenic	
Cadmium	J1, J+1
Potassium	J2, J+2
Selenium	J-1

If the field is left blank no actions or qualifications were necessary.

J1	-	Positive result is flagged as estimated (J) due to uncertainty at the low level.
J2	-	Result is flagged as estimated (J) due to non-compliant serial dilution reproducibility.
J+1	-	Positive result <2 PQL is flagged as estimated with the potential for high bias (J+) due to non-compliant CRI recovery.
J+2	-	Positive result is flagged as estimated with the potential for high bias (J+) due to non-compliant MS/MSD recoveries.
J-1	-	Result <2 PQL is flagged as estimated with the potential for low bias (J-) due to non-compliant CRI recovery.

TECHNICAL REVIEW REPORT

SDG 10316268

ELEMENTAL PARAMETERS

TECHINCAL REVIEW REPORT

SDG 10316268

ELEMENTAL PARAMETERS

The data evaluation was based on USEPA SW-846 Method 6010B for cadmium, potassium, and phosphorus and 6020 for arsenic and selenium (Methods) and included the following parameters:

- calibration
- blanks
* - ICP interference check sample
- matrix spike analysis
- duplicate sample analysis
* - laboratory control sample analysis
* - ICP serial dilution analysis
* - ICPMS internal standard analysis
- detection limits
- overall assessment

* All criteria were met for this parameter.

Table A-2 summarizes the technical review actions that are detailed below.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

CALIBRATION:

Low-level calibration standards (CRI) providing recoveries not within 90-110% are tabulated below:

CRI ID.	ELEMENT	RECOVERY (%)
8-3/00:25	cadmium	123.4
	potassium	84.8
8-7/03:20	selenium	83.8
8-7/14:31	selenium	85.2

Associated samples requiring action: (cadmium) - 507166, 507113, 507168, 507104; (selenium) - 507156, 507601, 507157

Action:

- For recovery above the upper limit positive results reported <2 PQL for the element are flagged as estimated with the potential for high bias (J+).
- For recovery below the lower limit results reported <2 PQL for the element are flagged as estimated with the potential for low bias (J-).

Comment:

Only calibrations bracketing samples associated with this SDG are evaluated.

BLANKS:

Blanks providing positive results and their associated action levels (AL) are tabulated below:

BLANK ID.	ELEMENT	CONC. (mg/L)	AL (mg/L)
CCB 8-3/01:06	potassium	0.245	1.23
CCB 8-3/01:55	cadmium	0.00068	0.0034
	potassium	0.521	2.61
CCB 8-10/09:34	potassium	0.710	3.55

BLANK ID.	ELEMENT	CONC. (mg/L)	AL (mg/L)
CCB 8-10/10:12	potassium	0.600	3.00
507CDI	potassium	0.28	1.4
507701	potassium	0.14	0.70

Associated samples with positive results reported below the action level: (cadmium) - 507166, 507113, 507168, 507104

Action:

- Positive results are flagged as not-detected at the reported value (U).

Comments:

Only calibration blanks bracketing samples associated with the SDG were evaluated.

MATRIX SPIKE ANALYSIS:

Comments:

For sample 507157 the native level of potassium exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS:

Comments:

For this SDG sample 507601 is collocated with sample 507156. For this collocated sample pair all precision limits specified in the QAPP were met.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of $\pm$ 100 percent. The Estimated Quantitation Limit (EQL), is established at 5-10X the MDL in SW-846.

Action:

- Positive results reported between the MDL and PQL are flagged as estimated (J).

Comments:

The data user is cautioned that these results may not be analytically reproducible or statistically valid.

OVERALL ASSESSMENT:

The positive results reported <2 PQL for cadmium in samples 507166, 507113, 507168, and 507104 are flagged as estimated with the potential for high bias (J+) due to non-compliant CRI stability.

The results reported <2 PQL for selenium in samples 507156, 507601, and 507157 are flagged as estimated with the potential for low bias (J-) due to non-compliant CRI stability.

The positive results reported for cadmium in samples 507166, 507113, 507168, and 507104 are flagged as not-detected at the reported value (U) due to blank contamination.

Positive results reported <PQL are flagged as estimated (J) due to uncertainty at the low level.

All additional QC results reviewed were within specification and no further actions or qualifiers were necessary.

TABLE A-2.

TECHNICAL REVIEW ACTION SUMMARY

SDG 10316268

Arsenic	
Cadmium	J1, J+1, U1
Potassium	
Selenium	J-1
Phosphorus	

If the field is left blank no actions or qualifications were necessary.

J1	-	Positive result <PQL is flagged as estimated (J) due to uncertainty at the low level.
J+1	-	Positive results <2 PQL are flagged as estimated with the potential for high bias (J+) due to non-compliant CRI stability.
J-1	-	Results <2 PQL are flagged as estimated with the potential for low bias (J-) due to non-compliant CRI stability.
U1	-	Positive result is flagged as not-detected at the reported value (U) due to blank contamination.

TECHNICAL REVIEW REPORT

SDG 10316058

WET CHEMISTRIES

TECHNICAL REVIEW REPORT

SDG 10316058

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

* - holding times
* - calibration
* - blanks
- matrix spike sample analysis
* - standard reference material analysis
- duplicate sample analysis
- detection limits
- overall assessment

* All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

MATRIX SPIKE SAMPLE ANALYSIS:

Samples providing matrix spike (MS)/MS duplicate (MSD) precision or recoveries not within the laboratory default limits when the native level is reported at less than four times the spiking level are tabulated below:

SAMPLE ID.	PARAMETER	MS/MSD RECOVERY (%)
507172	o-phosphate-P	16/
507114	fluoride (IC)	82/55

Action:

- For both MS and MSD recoveries below the lower limit sample results reported for the parameter are flagged as estimated with the potential for low bias (J-).

Comments:

For recovery no action is applied when only one of the MS/MSD pairs is out of specification.

The above actions are applied to all environmental samples associated with the laboratory group in the SDG.

For sample 507114 the native levels of chloride and sulfate exceeded four times the spiking level, therefore, this parameter could not be evaluated.

For sample 507172 the native levels of chloride, nitrate-N, and sulfate exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS:

1. Field Duplicates:

Comments:

For this SDG sample 507600 is collocated with sample 507177. For this collocated sample pair all precision limits specified in the QAPP were met.

2. Samples analyzed for fluoride by IC and ISE:

Samples 507131 and 507114 were analyzed for fluoride by both IC and ISE Methods. For these samples the ISE Method provided results considerably lower than the IC Method. Only the results from the ISE Method should be used.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of ± 100 percent. The Estimated Quantitation Limit (EQL) is established at 5-10X the MDL in SW-846.

Action:

- Positive values reported between the MDL and PQL are flagged as estimated (J).

Comments:

Any values below the PQL contain inherently increasing error bands as the numbers become smaller. It is essential that the data user considers these statistical impacts on data quality at the low levels.

OVERALL ASSESSMENT:

Sample 507114 provided MS/MSD recoveries of fluoride (IC) below the lower limit. The results reported for this parameter in samples 507147, 507148, 507149, 507128, 507127, 507126, 507124, 507131, and 507114 associated with the Batch are flagged as estimated with the potential for low bias (J-).

Any values reported positive between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low levels.

All additional QC criteria evaluated were within specification and no further actions or flagging were required or deemed necessary.

TECHNICAL REVIEW REPORT

SDG 10316268

WET CHEMISTRIES

TECHNICAL REVIEW REPORT

SDG 10316268

WET CHEMISTRIES

The data evaluation was based on the procedures set forth in the Methods and included the following parameters:

* - holding times
* - calibration
* - blanks
- matrix spike sample analysis
* - standard reference material analysis
- duplicate sample analysis
- detection limits
- overall assessment

* All criteria were met for this parameter.

Data validation, described in SW-846 and the Guidelines, which includes an evaluation of the usability of technically reviewed results with respect to project Data Quality Objectives and site chemistry knowledge, is included in the Data Validation/Usability Report.

A glossary of data qualifier definitions is presented in Appendix B.

MATRIX SPIKE SAMPLE ANALYSIS:

Samples providing matrix spike (MS)/MS duplicate (MSD) recoveries or precision not within the laboratory default limits when the native level is reported at less than four times the spiking level are tabulated below:

SAMPLE ID.	PARAMETER	MS/MSD RECOVERY (%)
507123	ammonia-N	/80
	fluoride (IC)	85/85
	nitrate-N	72/73
507157	chloride	57/56
	nitrate-N	88/89

Action:

- For both MS and MSD recoveries below the lower limit sample results reported for the parameter are flagged as estimated with the potential for low bias (J-).

Comments:

The above action is applied to all samples associated with the SDG.

For recovery no action is applied when only one of the MS/MSD pairs is out of specification.

For chloride and sulfate the native levels in sample 507123 and sulfate in sample 507157 exceeded four times the spiking level, therefore, this parameter could not be evaluated.

DUPLICATE SAMPLE ANALYSIS:

1. Field Duplicates.

Comments:

For this SDG sample 507601 is collocated with sample 507156. For this collocated sample pair all precision limits specified in the QAPP were met.

2. Samples analyzed for fluoride by IC and ISE methods:

Samples 507155, 507156, 507601, and 507157 were analyzed by both methods and the ISE result was lower than the IC method. For all except 507155 only the results from the ISE method should be used since they were significantly lower than the IC value.

DETECTION LIMITS:

For this SDG, the laboratory was required to report results to their method detection limit (MDL). The MDL (described in 40CFR Part 136, Appendix B and incorporated by reference in SW-846), provides an error band, by definition, of ± 100 percent. The Estimated Quantitation Limit (EQL) is established at 5-10X the MDL in SW-846.

Action:

- Positive values reported between the MDL and PQL are flagged as estimated (J).

Comments:

Any positive values below the PQL contain inherently increasing error bands as the numbers become smaller. It is essential that the data user considers these statistical impacts on data quality at the low levels.

OVERALL ASSESSMENT:

Sample 507123 provided MS/MSD recoveries of fluoride IC and nitrate-N and sample 507157 provided MS/MSD recoveries of chloride and nitrate-N below the lower limit. The results reported for these parameters in all samples associated with the SDG are flagged as estimated with the potential for low bias (J-).

Samples 507155, 507156, 507601, and 507157 were analyzed by both methods and the ISE result was lower than the IC method. For all except 507155 only the results from the ISE method should be used since they were significantly lower than the IC value.
Any values reported positive between the MDL and PQL are flagged as estimated (J) due to uncertainty at the low levels.

All additional QC criteria evaluated were within specification and no further actions or flagging were required or deemed necessary.

APPENDIX B

DEFINITION OF DATA QUALIFIERS

GLOSSARY OF DATA QUALIFIERS

J - The associated value is an estimated quantity.

R - The data are unusable.

U - The parameter is not detected at the reported value.

B - The value is above the MDL or IDL but below the RL, or CRDL

APPENDIX C

GLOSSARY OF ACRONYMS

GLOSSARY OF ACRONYMS

SDG	-	Sample Delivery Group
USEPA	-	Unites States Environmental Protection Agency
DQO	-	Data Quality Objectives
QAPjP	-	Quality Assurance Project Plan
RPD	-	Relative Percent Difference
CRDL	-	Contract Required Detection Limit
RL	-	Reporting Limit
IDL	-	Instrument Detection Limit
MDL	-	Method Detection Limit
CLP	-	Contract Laboratory Program
ICP	-	Ion Coupled Plasma
MS	-	Matrix Spike
MSD	-	Matrix Spike Duplicate

DATA PACKAGE REPORT

SAMPLE DELIVERY GROUP

RCRA SDG

10316058

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507114 A,B,C **Lab ID: 10316058019** Collected: 07/29/15 11:10 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	**0.0048** J+	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:42	7440-43-9	
Potassium	**37.4** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:42	7440-09-7	M1
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.12**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 05:10	7440-38-2	
Selenium	**0.0021**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 05:10	7782-49-2	
SM4500F-C Fluoride	Analytical Method: SM 4500F/C								
Fluoride	**0.95** J	mg/L	1.0	0.051	1		08/08/15 13:51	16984-48-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**135**	mg/L	2.4	1.2	2		07/31/15 02:03	16887-00-6	M1
Fluoride	~~3.3~~ J	mg/L	0.10	0.0073	2		07/31/15 02:03	16984-48-8	M1
Nitrate as N	ND	mg/L	0.10	0.050	1		07/30/15 16:31	14797-55-8	
Sulfate	**100**	mg/L	2.4	1.2	2		07/31/15 02:03	14808-79-8	M1
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**1.9**	mg/L	0.040	0.020	1		08/10/15 10:40	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**1.6**	mg/L	0.10	0.035	20		07/30/15 16:27		M6

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507124 **Lab ID: 10316058017** Collected: 07/29/15 09:00 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:25	7440-43-9	
Potassium	**16.6** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:25	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0086**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:52	7440-38-2	
Selenium	**0.0034**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:52	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**189**	mg/L	6.0	3.0	5		07/31/15 04:24	16887-00-6	
Fluoride	**0.76** J-	mg/L	0.050	0.0036	1		07/30/15 20:18	16984-48-8	
Nitrate as N	**3.2**	mg/L	0.10	0.050	1		07/30/15 20:18	14797-55-8	
Sulfate	**88.9**	mg/L	1.2	0.60	1		07/30/15 20:18	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:36	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.10**	mg/L	0.0050	0.0017	1		07/30/15 16:13		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507126 **Lab ID: 10316058016** Collected: 07/29/15 08:20 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:22	7440-43-9	
Potassium	**12.4** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:22	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0075**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:47	7440-38-2	
Selenium	**0.0023**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:47	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**93.1**	mg/L	1.2	0.60	1		07/30/15 20:03	16887-00-6	
Fluoride	**0.90** J-	mg/L	0.050	0.0036	1		07/30/15 20:03	16984-48-8	
Nitrate as N	**2.2**	mg/L	0.10	0.050	1		07/30/15 20:03	14797-55-8	
Sulfate	**88.2**	mg/L	1.2	0.60	1		07/30/15 20:03	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:35	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.083**	mg/L	0.0050	0.0017	1		07/30/15 16:12		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507127 **Lab ID: 10316058015** Collected: 07/29/15 07:45 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:16	7440-43-9	
Potassium	**18.6** J-	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:16	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0071**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:43	7440-38-2	
Selenium	**0.0059**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:43	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**298**	mg/L	6.0	3.0	5		07/31/15 04:06	16887-00-6	
Fluoride	**0.56** J-	mg/L	0.050	0.0036	1		07/30/15 19:48	16984-48-8	
Nitrate as N	**5.7**	mg/L	0.10	0.050	1		07/30/15 19:48	14797-55-8	
Sulfate	**217**	mg/L	6.0	3.0	5		07/31/15 04:06	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:34	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.092**	mg/L	0.0050	0.0017	1		07/30/15 16:11		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507128 **Lab ID: 10316058014** Collected: 07/28/15 18:20 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:10	7440-43-9	
Potassium	**22.0** H	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:10	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.014**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:38	7440-38-2	
Selenium	**0.0037**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:38	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**297**	mg/L	6.0	3.0	5		07/31/15 01:44	16887-00-6	
Fluoride	**0.43** I	mg/L	0.050	0.0036	1		07/30/15 16:14	16984-48-8	
Nitrate as N	**7.5**	mg/L	0.10	0.050	1		07/30/15 16:14	14797-55-8	
Sulfate	**124**	mg/L	6.0	3.0	5		07/31/15 01:44	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:33	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.19**	mg/L	0.0050	0.0017	1		07/30/15 16:08		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507131 **Lab ID: 10316058018** Collected: 07/29/15 10:00 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	**0.0031** J+	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:37	7440-43-9	
Potassium	**18.2** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:37	7440-09-7	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium, Dissolved	**0.0025** J	mg/L	0.0030	0.00065	1	07/31/15 10:55	08/03/15 00:58	7440-43-9	
Potassium, Dissolved	**17.7** J+	mg/L	2.5	0.13	1	07/31/15 10:55	08/03/15 00:58	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.047**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:56	7440-38-2	
Selenium	**0.00081** J-	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:56	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic, Dissolved	**0.049**	mg/L	0.00050	0.00011	1	07/31/15 11:39	08/03/15 10:51	7440-38-2	
Selenium, Dissolved	**0.00078**	mg/L	0.00050	0.00020	1	07/31/15 11:39	08/03/15 10:51	7782-49-2	
SM4500F-C Fluoride	Analytical Method: SM 4500F/C								
Fluoride	**0.19** J	mg/L	1.0	0.051	1		08/08/15 13:47	16984-48-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**201**	mg/L	6.0	3.0	5		07/30/15 22:52	16887-00-6	
Fluoride	~~**76.0**~~ J-	mg/L	5.0	0.36	100		07/31/15 04:59	16984-48-8	
Nitrate as N	ND	mg/L	0.10	0.050	1		07/30/15 20:33	14797-55-8	
Sulfate	**171**	mg/L	6.0	3.0	5		07/30/15 22:52	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.028** J	mg/L	0.040	0.020	1		08/10/15 10:38	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**7.0**	mg/L	0.20	0.070	40		07/30/15 16:26		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507147 **Lab ID: 10316058011** Collected: 07/28/15 16:05 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 01:59	7440-43-9	
Potassium	**14.0** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 01:59	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0045**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:10	7440-38-2	
Selenium	**0.0040**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:10	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**157**	mg/L	6.0	3.0	5		07/31/15 00:51	16887-00-6	
Fluoride	**0.67** J-	mg/L	0.050	0.0036	1		07/30/15 15:28	16984-48-8	
Nitrate as N	**4.3**	mg/L	0.10	0.050	1		07/30/15 15:28	14797-55-8	
Sulfate	**65.1**	mg/L	1.2	0.60	1		07/30/15 15:28	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:31	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.043**	mg/L	0.0050	0.0017	1		07/30/15 15:33		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507148 **Lab ID: 10316058012** Collected: 07/28/15 16:45 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:03	7440-43-9	
Potassium	**16.1** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:03	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0060**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:29	7440-38-2	
Selenium	**0.0041**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:29	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**182**	mg/L	6.0	3.0	5		07/31/15 01:09	16887-00-6	
Fluoride	**0.74** J-	mg/L	0.050	0.0036	1		07/30/15 15:43	16984-48-8	
Nitrate as N	**3.5**	mg/L	0.10	0.050	1		07/30/15 15:43	14797-55-8	
Sulfate	**85.5**	mg/L	1.2	0.60	1		07/30/15 15:43	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:31	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.078**	mg/L	0.0050	0.0017	1		07/30/15 16:06		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507149 **Lab ID: 10316058013** Collected: 07/28/15 17:40 Received: 07/30/15 10:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	08/01/15 14:53	08/03/15 02:06	7440-43-9	
Potassium	**14.8** J+	mg/L	2.5	0.13	1	08/01/15 14:53	08/03/15 02:06	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0070**	mg/L	0.00050	0.00011	1	08/01/15 14:37	08/07/15 04:34	7440-38-2	
Selenium	**0.0025**	mg/L	0.00050	0.00020	1	08/01/15 14:37	08/07/15 04:34	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**141**	mg/L	6.0	3.0	5		07/31/15 01:26	16887-00-6	
Fluoride	**0.96** J-	mg/L	0.050	0.0036	1		07/30/15 15:58	16984-48-8	
Nitrate as N	**2.4**	mg/L	0.10	0.050	1		07/30/15 15:58	14797-55-8	
Sulfate	**64.7**	mg/L	1.2	0.60	1		07/30/15 15:58	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/10/15 10:32	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.085**	mg/L	0.0050	0.0017	1		07/30/15 16:17		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507154 **Lab ID: 10316058004** Collected: 07/28/15 09:30 Received: 07/29/15 09:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	07/30/15 10:07	07/30/15 19:00	7440-43-9	
Potassium	**13.8** J+	mg/L	2.5	0.13	1	07/30/15 10:07	07/30/15 19:00	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0045**	mg/L	0.00050	0.00011	1	07/30/15 10:10	07/31/15 17:07	7440-38-2	
Selenium	**0.0031**	mg/L	0.00050	0.00020	1	07/30/15 10:10	07/31/15 17:07	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**205**	mg/L	6.0	3.0	5		07/29/15 20:28	16887-00-6	
Fluoride	**0.99**	mg/L	0.050	0.0036	1		07/29/15 16:46	16984-48-8	
Nitrate as N	**2.8**	mg/L	0.10	0.050	1		07/29/15 16:46	14797-55-8	
Sulfate	**54.3**	mg/L	1.2	0.60	1		07/29/15 16:46	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/04/15 18:18	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.039**	mg/L	0.0050	0.0017	1		07/29/15 17:18		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507171 **Lab ID: 10316058007** Collected: 07/28/15 11:55 Received: 07/29/15 09:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	07/30/15 10:07	07/30/15 19:13	7440-43-9	
Potassium	**21.2** J+	mg/L	2.5	0.13	1	07/30/15 10:07	07/30/15 19:13	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.019**	mg/L	0.00050	0.00011	1	07/30/15 10:10	07/31/15 17:20	7440-38-2	
Selenium	**0.0030**	mg/L	0.00050	0.00020	1	07/30/15 10:10	07/31/15 17:20	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**205**	mg/L	6.0	3.0	5		07/29/15 21:38	16887-00-6	
Fluoride	**0.51**	mg/L	0.050	0.0036	1		07/29/15 17:31	16984-48-8	
Nitrate as N	**5.8**	mg/L	0.10	0.050	1		07/29/15 17:31	14797-55-8	
Sulfate	**89.7**	mg/L	1.2	0.60	1		07/29/15 17:31	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/04/15 18:20	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.12**	mg/L	0.0050	0.0017	1		07/29/15 17:20		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507172 **Lab ID: 10316058010** Collected: 07/28/15 14:25 Received: 07/29/15 09:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	07/30/15 10:07	07/30/15 19:27	7440-43-9	
Potassium	**24.8** J+	mg/L	2.5	0.13	1	07/30/15 10:07	07/30/15 19:27	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.022**	mg/L	0.00050	0.00011	1	07/30/15 10:10	07/31/15 17:43	7440-38-2	
Selenium	**0.0042**	mg/L	0.00050	0.00020	1	07/30/15 10:10	07/31/15 17:43	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**130**	mg/L	2.4	1.2	2		07/29/15 22:45	16887-00-6	M1
Fluoride	**0.56**	mg/L	0.050	0.0036	1		07/29/15 18:17	16984-48-8	
Nitrate as N	**9.5**	mg/L	0.20	0.10	2		07/29/15 22:45	14797-55-8	M1
Sulfate	**71.7**	mg/L	1.2	0.60	1		07/29/15 18:17	14808-79-8	M1
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/04/15 18:27	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.38**	mg/L	0.025	0.0087	5		07/29/15 17:31		M1

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507173 **Lab ID: 10316058006** Collected: 07/28/15 11:05 Received: 07/29/15 09:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	07/30/15 10:07	07/30/15 19:09	7440-43-9	
Potassium	**13.8** J+	mg/L	2.5	0.13	1	07/30/15 10:07	07/30/15 19:09	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0033**	mg/L	0.00050	0.00011	1	07/30/15 10:10	07/31/15 17:16	7440-38-2	
Selenium	**0.0044**	mg/L	0.00050	0.00020	1	07/30/15 10:10	07/31/15 17:16	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**258**	mg/L	6.0	3.0	5		07/29/15 21:21	16887-00-6	
Fluoride	**0.80**	mg/L	0.050	0.0036	1		07/29/15 17:16	16984-48-8	
Nitrate as N	**3.3**	mg/L	0.10	0.050	1		07/29/15 17:16	14797-55-8	
Sulfate	**65.9**	mg/L	1.2	0.60	1		07/29/15 17:16	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/04/15 18:20	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.032**	mg/L	0.0050	0.0017	1		07/29/15 17:20		

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ANALYTICAL RESULTS

Project: RCRA
Pace Project No.: 10316058

Sample: 507174 **Lab ID: 10316058001** Collected: 07/28/15 08:05 Received: 07/29/15 09:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Cadmium	ND	mg/L	0.0030	0.00065	1	07/30/15 10:07	07/30/15 18:28	7440-43-9	
Potassium	**11.5**	mg/L	2.5	0.13	1	07/30/15 10:07	07/30/15 18:28	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3020								
Arsenic	**0.0035**	mg/L	0.00050	0.00011	1	07/30/15 10:10	07/31/15 16:54	7440-38-2	
Selenium	**0.0050**	mg/L	0.00050	0.00020	1	07/30/15 10:10	07/31/15 16:54	7782-49-2	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**206**	mg/L	6.0	3.0	5		07/29/15 19:35	16887-00-6	
Fluoride	**0.74**	mg/L	0.050	0.0036	1		07/29/15 16:01	16984-48-8	
Nitrate as N	**4.7**	mg/L	0.10	0.050	1		07/29/15 16:01	14797-55-8	
Sulfate	**93.4**	mg/L	1.2	0.60	1		07/29/15 16:01	14808-79-8	
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	ND	mg/L	0.040	0.020	1		08/04/15 18:15	7664-41-7	
Phosphate, Ortho Low Level	Analytical Method: SM 4500-P E								
Orthophosphate as P	**0.052**	mg/L	0.0050	0.0017	1		07/29/15 17:13		

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